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RUBY-THROATED HUMMINGBIRD NEST SUCCESS IN NORTHWEST TENNESSEE

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Abstract

During 5 nesting seasons (2011-2015) in northwest Tennessee, 28 of 103 (27%) Ruby-throated Hummingbird (*Archilochus colubris*) nesting attempts were successful (i.e., produced at least one fledgling). Annual nest success varied from 7% (2 of 30 nesting attempts) in 2014 to 64% in 2011 (7 of 11 nesting attempts). Significantly more nests failed during the egg stage (61%, n= 46) than during the nestling stage (39%, n = 29). Nest success did not vary significantly by date of nest initiation, height of nest above ground, species of tree in which the nest was located, or location on the study area. Predation was the primary cause of nest failure.

Introduction

Ruby-throated Hummingbirds (hereafter abbreviated as RTHUs) nest throughout most of the eastern half of the United States and across southern Canada from the Atlantic Ocean almost to the Pacific Ocean (Weidensaul et al. 2013). The number of RTHUs on the breeding grounds has risen to an estimated 20,000,000 individuals (Partners in Flight Science Committee 2012). Weidensaul et al. (2013) noted that in spite of the wide geographic range and large population size, many aspects of RTHU biology remain unstudied. Weidensaul et al. (2013) stated, "… there is not [sic] single study of nesting success in this species." I report in this paper the results of a 5-year (2011-2015) study of RTHU nesting success in Tennessee.

Study Area

My study area was located at the southwest edge of the city of Martin in Weakley County, Tennessee. Coordinates for the approximate center of my study area are 36°19'05" N, 88°54'02" W. The study area consisted of 9.6 ha of level ridge that I divided into three tracts (Figure 1). The Redleaves tract (2.8 ha) contained my house, yard, garden, a 1.4 ha row crop field, and surrounding woodland. The Morgan tract (4.5 ha) was covered by closed-canopy woodland. Most of this tract was farmland until approximately 1955. The Leonard tract (2.3 ha) supported young woodland, mostly less than 30 years old, with larger trees at the edges. It was farmed until around 1965 and has subsequently reverted to woodland. A narrow public road separated the Leonard tract from the other two tracts.

Woodland consisted primarily of oak (*Quercus* spp.), hickory (*Carya* spp.), and maple (*Acer* spp.), along with numerous other deciduous species. No timber had been harvested from any of the tracts for more than 50 years. I planted a strip, approximately 50 m long and 10 m wide, of Virginia Pines (*Pinus virginiana*) near the center of the Redleaves tract in 1977. In 2015, many of these trees were 15 m tall. Red Cedars (*Juniperus virginiana*) were scattered in openings along the woodland margins of all three tracts.

The borders of agriculture fields with the Redleaves and Morgan woodlands supported dense growths of Blackberry (*Rubus fruiticosus*), Japanese Honeysuckle (*Lonicera japonica*), Goldenrod (*Solidago virguarea*), and other plants. In contrast, farmers annually sprayed herbicides onto the margins of the Leonard woodlands and killed most non-woody plants. In a 2-year rotation plan, farmers alternated crops of Corn (*Zea mays*) and Soybeans (*Glycine max*) in the Redleaves and Leonard agriculture fields. In 2015, the Redleaves field was converted to native grasses, primarily Little Bluestem (*Schizachyrium scoparium*), Switch-Grass (*Panicum virgatum*), and Sideoats Grama (*Bouteloua curtipendula*).

Three feeders in the Redleaves yard provided RTHUs a solution of approximately 35% sucrose and 65% water *ad libitum* from late March into November. Natural foods of RTHUs, both plant nectar and a diversity of small arthropods, were abundant on the study area, but I did not measure the amount that was present.

Methods

I searched my study area for RTHU nests each year (2011-2015) from the arrival of RTHUs, in early April, through August. I estimate, probably conservatively, that I spent 2,500 hours searching for RTHU nests and making nest inspections. To find nests I watched and attempted to follow females (1) as they departed from feeders; (2) that I observed gathering nest material, either from plants or from other RTHU nests; (3) that I repeatedly heard or observed away from feeders; (4) that I saw perched on dead twigs away from food sources; and, (5) that attacked other birds or small mammals such as squirrels (*Sciurus* spp.) away from food sources. I walked through each tract at least 3 times per week and made frequent stops of 15 to 60 minutes when I sat in a comfortable chair and watched for signs of RTHU nesting activity. While seated I frequently used 8X binoculars to scan nearby limbs for RTHU nests. Weidensaul et al. (2013) noted that RTHUs typically construct their nests on the outer tips of sloping limbs at various heights and in numerous species of trees, so I concentrated my scanning on the outer 1 m of down-sloping limbs without regard to height

Figure 1. Aerial photograph (courtesy of Google Earth) of study area consisting of 3 tracts. The East-West length of the Leonard tract is approximately 400 m.

above the ground or species of tree.

When I discovered a RTHU nest, I recorded in my field notebook (1) the location of the nest tree, (2) the species of the nest tree, (3) the diameter at breast height (DBH) of the nest tree (only in 2013-2015), (4) the estimated height of the nest above ground, (5) the diameter of the nest limb at the point of nest attachment, (6) the distance from the nest to the end of the limb, (7) whether the nest limb was level, up-sloping, or down-sloping at the point where the nest was attached, (8) the estimated distance from the nest to the main trunk of the tree along the nest limb (only in 2014 and 2015), (9) the extent to which nearby limbs and leaves provided a canopy over the nest, (10) the amount of vegetation immediately beneath the nest, (11) any information that would indicate the stage of nesting (i.e., nest building, incubation, or nestling), and (12) the type of clue (e.g., female carrying nest material, sound of RTHU wings, female returning to nest after escorting away another bird) that led to my discovery of the nest. At sites where the nest was not conspicuous, I made a sketch of the area to assist me in relocating the nest. I assigned each nest a number based on the year and sequence of discovery. For example, nest 2013.09 was the ninth nest I discovered in 2013. Under each nest number in my field notes, I recorded by date and time my observations about that nest.

I usually inspected each nest and noted any activity at least once every 48 hours until either the nestlings fledged or the nest failed. To help determine time of fledging, I made multiple inspections each day at some nests that contained large young. I used a mirror attached to a 6 m aluminum extension pole (sold as an aid to window cleaning) to examine the contents of nests that were no higher than approximately 7 m above ground level. For higher nests I estimated the stage of nesting by observing the tending female. When nestlings were large enough to be visible above the rim of the nest, I estimated their age based on descriptions of known age nestlings (Sargent 1999, Weidensaul et al., 2013) and backdated to estimate the date when the first egg was laid.

To determine whether or not a nest was active, I sat and watched it. During the egg stage of nesting, I watched for the female to incubate. During the nestling stage I watched for movements of the young birds, brooding by the female, or feeding of young by the female. I used the clues described in Table 1 to assist in assigning a cause of nest failure.

Table 1. Clues that assisted in assigning a cause of RTHU nest failure.

Clue	Possible Cause of Failure
Nest missing; intact nest on ground beneath the nest limb	Nest attachment to limb failed
Nest missing; damaged nest on ground beneath the nest limb	Predator, bird or mammal, tore nest from limb; or strong wind
Nest intact; contents missing	Predator, snake or bird; or strong wind might toss eggs
Nest intact; contents present	Abandoned by female
Nest damaged; holes in nest walls	Avian predator such as jay or woodpecker
Nest damaged; no distinct holes in nest walls	Predator, mammal or bird
Intact eggs (may have minor dents or cracks) on ground beneath nest	Strong wind
Eggshell fragments in nest or on ground beneath nest	Predator, mammal (but could be bird)
Nest either intact or damaged; feathers (from bird other than a hummingbird) attached to nest limb and/or nearby twigs	Predation by bird

I defined an "active nest" as a nest being tended by a female RTHU; a "nesting attempt" as an active nest that received at least 1 egg; the "date of nest initiation" as the date when the first egg was laid; and, "nest success" as the percentage of nesting attempts in which at least one nestling fledged. Plant nomenclature follows Tennessee Flora Committee (2014). Bird nomenclature follows American Ornithologists' Union (1998).

Results

I found a total of 128 RTHU nests. At 19 nests I did not see a tending female or any eggs. At 6 other nests I did see females briefly tending the nests, but I had no evidence that any eggs were laid. These 25 nests did not meet my definition of a nesting attempt and were excluded from my analysis. At the remaining 103 nests I observed female activity and had evidence that at least one egg was laid. These 103 nesting attempts are the subject of this paper.

Annual nest success varied from a low of 7% in 2014 to a high of 64% in 2011, with an overall success rate of 27% (Table 2). Significantly more nest failures occurred during the egg stage (i.e., egg laying and incubation) than during the nestling stage (Table 3). With the exception of 1 nest that was initiated in late April, all nests were begun in May-July. Date of nest initiation did not significantly influence nest success (Table 4). Neither nest height above the ground (Table 5), species of tree in which the nest was built (Table 6), nor location on the study area (Table 7) significantly influenced nest success.

Table 2. RTHU annual nest success 2011-2015.

Year	No. Active Nests	No. Successful Nests	Percent Successful Nests	No. Young Fledged
2011	11	7	64	14
2012	17	5	29	9
2013	20	6	30	12
2014	30	2	7	3
2015	25	8	32	15
Summary	**103**	**28**	**27**	**53**

Table 3. Stage of nesting when failure occurred for 75 RTHU nests.

Year	No. Active Nests That Failed	No. Nests That Failed During Egg Stage	No. Nests That Failed During Nestling Stage
2011	4	4 (100%)	0 (0%)
2012	12	8 (67%)	4 (33%)
2013	14	7 (50%)	7 (50%)
2014	28	16 (57%)	12 (43%)
2015	17	11 (65%)	6 (35%)
Summary	75	46 (61%)	29 (39%)
Chi square statistic = 3.853. P = 0.0496. Difference is statistically significant at $P < 0.05$.			

Table 4. Influence of date of nest initiation on RTHU nest success.

	No. Nests Initiated	No. Successful Nests	% Successful Nests
April	1	1	100
May	41	7	17
June	38	13	34
July	23	7	30
Total	**103**	**28**	**27**
Chi-square statistic (for May-July) = 3.216. P-value = 0.2003. Result is not significant at $p < 0.05$.			

Table 5. Influence of nest height on RTHU nest success.

Nest Height (m)	No. Nests	No. Successful Nests	% Successful Nests
0 - 5	31	7	23
5.1 - 10	62	18	29
10.1 +	10	3	30
Total	103	28	27
Chi-square statistic = 0.4789. P-value = 0.7871. Result is not significant at $p < 0.05$.			

Table 6. Effect of tree species on RTHU nest success.

Tree Species	No. Nests	No. Successful Nests	% Successful Nests
Ash, sp. (*Fraxinus* sp.)	1	0	0
Elm, spp. (*Ulmus* spp.)	17	4	24
Gum, Sweet (*Liquidambar styraciflua*)	9	2	22
Maple, Sugar (*Acer saccharum*)	37	8	22
Oak, spp.	23	10	44
Pine, Virginia	9	1	11
Sycamore (*Platanus occidentalis*)	7	3	43
Total	103	28	27
Chi-square statistic = 5.89. P = 0.317. Results are not statistically significant at $P < 0.05$. Ash, sp. not included in analysis.			

Table 7. Variation in RTHU nest success by location on study area.

Tract	No. Nests	No. Successful Nests	% Successful Nests
Leonard	32	10	31
Morgan	24	4	17
Redleaves	47	14	30
Total	103	28	27
Chi-square statistic = 1.268. P = 0.530. Results are not statistically significant at P < 0.05.			

The assigned causes of nest failure are summarized in Table 8. I observed 2 instances of nest predation [a Blue Jay (*Cyanocitta cristata*) removed a nestling, and a Tufted Titmouse (*Baeolophus bicolor*) removed an egg] and 2 instances of what I suspect would have been predation if the nest had contained either eggs or nestlings [a Blue Jay pecked a 1 cm diameter hole in the wall of an empty nest, and a Red-bellied Woodpecker (*Melanerpes carolinus*) flew directly to an empty nest and looked into the nest repeatedly]. I also observed a failed nest with Barred Owl (*Strix varia*) feathers caught on twigs less than 10 cm from the nest. Table 9 summarizes my observations of female RTHUs chasing other animals that were near the RTHU's nest.

Table 8. Assigned causes of RTHU nest failure.

Cause of Failure	No. Nests	% of Failures
Abandoned	2	3
Farm Equipment	1	1
Predation	63	84
Weather	9	12
Total	75	100
Chi-square statistic = 141.267. P < 0.0001. Results are statistically significantly different.		

Table 9. Animals that approached a RTHU nest and were observed being chased by female RTHU.

	Species	No. Times Chased
01	RTHU	female: 10
02	Tufted Titmouse	6
03	Summer Tanager (*Piranga rubra*)	male: 4; female: 1
04	Northern Cardinal (*Cardinalis cardinalis*)	male: 2; female: 1
05	Acadian Flycatcher (*Empidonax virescens*)	3
06	Carolina Chickadee (*Poecile carolinensis*)	3
07	Blue Jay	2
08	Yellow-billed Cuckoo (*Coccyzus americanus*)	2
09	Prothonotary Warbler (*Protonotaria citrea*)	2
10	Blue-gray Gnatcatcher (*Polioptila caerulea*)	1
11	Eastern Phoebe (*Sayornis phoebe)*	1
12	Red-bellied Woodpecker	1
13	American Robin (*Turdus migratorius*)	1
14	Fox Squirrel (*Sciurus niger*)	1
15	Jumping Spider (Salticidae)	1
16	Green Stink Bug (Pentatomidae)	1

Discussion

Annual nest success of RTHUs varied from 7% to 64% (Table 2). The highest nest success was in the year (2011) with the smallest number of nesting attempts. The small sample size might have biased the results. In contrast, the lowest success was in the year (2014) with the largest number of nesting attempts. I suspect that many of these were re-nesting attempts after earlier failures. None of the RTHUs on my study area were banded or color marked, so

I could not be certain of their identity at nests. However, based on the timing and location of new nests, I suspect that females regularly re-nested, perhaps multiple times, near an earlier nest. The 2015 nesting season was unique due to a large hatch of Periodical Cicadas (*Magicicada* spp.), which might have deflected some of the avian predation on RTHU nests. If viewed out of context, the nest success of 32% in 2015 might appear to have been low, but 32% success is relatively high when compared to 7% success in 2014.

Skutch (1973, page 87) suggested that low nest success is typical of hummingbirds. Studies of the Broad-tailed Hummingbird (*Selasphorus platycercus*) and the Black-chinned Hummingbird (*Archilochus alexandri*), two of the most intensively studied species of hummingbirds in the western United States, support Skutch's (1973) conclusion. Broad-tailed Hummingbirds fledged young from 46% of 164 nests with a range in annual success from 18% to 64% (Camfield et al. 2013). Cumulative nest success in a multiple year study of 157 Black-chinned Hummingbird nests was 34% (Baltosser 1986). Perhaps the extreme annual variation and overall low success I documented in RTHUs are normal. However, I would feel more comfortable about this conclusion if data were available from a larger number of nests over a wider geographic range.

One weakness of this study is the subjective manner in which I used information, such as that summarized in Table 1, to assign a cause of nest failure. I concluded that predation was responsible for 84% of the failures (Table 8). Based on my observations of other species of birds at RTHU nests and other birds being chased (Table 9), I suspect that most of the predation was by birds as did Baltosser (1986) in his study. I considered using cameras to document activities at RTHU nests. In addition to the cost, I was concerned about the possibility of cameras serving as markers to attract predators such as Blue Jays. One possible way to avoid, or at least minimize, this problem would be to construct and place dozens, possibly hundreds, of dummy cameras throughout the study area on limbs without hummingbird nests so that potential predators would be less likely to learn that a camera indicated a nearby nest.

The presence of an investigator can reduce avian nesting success, primarily by attracting predators or by causing nest abandonment (Götmark 1992). Could a predator follow my odor trail to a RTHU nest? I did not touch the nests, eggs, nestlings, adults, or the tree limbs that supported the nests. The mirror and the pole to which it was attached probably had a distinctive odor, but normally they did not touch the nest or the limbs near the nest. If a nest was located more than 7 m above the ground (and out of reach with my mirror), I observed the nest with a spotting scope and rarely came within 20 m of the nest. I doubt that predators following my odor trail would be able to locate nests I inspected or observed.

Would predators that hunt by sight, such as Blue Jays, be able to associate my presence with the presence of a RTHU nest? Would female RTHUs be likely to abandon their nests if they observed me near their nests? I think the answer to both questions is no. Other family members and I spent many hours on the study area (which included my house, lawn, and garden), both in areas where no RTHUs nested and in areas where RTHUs were nesting. Many, perhaps most, of the nesting female RTHUs encountered me at close range as I filled feeders or observed feeders from a short distance, sometimes less than 1 m. I suspect that most female RTHUs were habituated to the presence of humans and, generally, did not drastically

alter their behavior in the presence of humans. Potential nest predators such as Blue Jays, Red-bellied Woodpeckers, and Tufted Titmice most frequently encountered humans who were not near RTHU nests and, consequently, had few opportunities to associate humans with active RTHU nests. While I cannot rule out some degree of investigator interference on RTHU nesting activities, I believe such effects, if in fact they occurred, were rare.

My data on the stage of nesting when failure occurred (Table 3) show that significantly more nests failed during the egg stage (61%) than in the nestling stage (39%). These data are consistent with the conclusions of other studies (e.g., Baltosser 1986 and Pitts 1998). Baltosser (1986) suggested that the higher rate of nest loss during the egg stage could be due to, "…the fact that certain mortality factors, such as nest desertion, occur more frequently before hatching," and that, "…especially vulnerable nests are more likely to be found and destroyed by predators early in the nesting cycle."

Neither date of nest initiation (Table 4), nest height (Table 5), species of nest tree (Table 6), nor location on the study area (Table 7) had a significant effect on nest success. However, some trends are evident in the tables. For example, nests initiated in May were distinctly less successful (17%) than the mean rate (27%) (Table 4), and nests in oak trees were more successful (44%) than the mean rate (27%). Larger sample sizes might provide a clearer picture and identify some factors that affect nest success.

At each nest I estimated the extent to which nearby leaves and limbs provided a nest canopy. This was the most subjective of my nest site descriptors. In hindsight I realize that many of the successful nests were not only covered by a nearby canopy but were also shielded by vegetation on one or more sides of the nest. A more objective method of quantifying nest visibility, perhaps using photographs, might strengthen this descriptor and provide a more accurate predictor of nest success.

I am not aware of any previous studies of RTHU nesting success. Perhaps the difficulty, or perceived difficulty, of finding nests has been a deterrent. Most RTHU nests are probably found serendipitously. But some people, including W. R. Gettys and A. L. Pickens, searched for and found RTHU nests. W. R. Gettys (1876-1910) was an egg collector who lived at Athens, in McMinn County, Tennessee. Between 1897 and 1909 he found at least 67 RTHU nests (Ijams and Hofferbert 1934). Ijams and Hofferbert (1934) noted, "…it is doubtful if any other bird student ever lived who equaled his record of finding [RTHU nests]." Unfortunately, I do not know how Gettys searched for RTHU nests. To find nests in South Carolina, Pickens (1936, 1944) followed females departing from feeding sites and searched areas where he heard hovering RTHUs. He mentions 10 nests in one area and 11 nests in another area. The exact number of RTHU nests Pickens found is difficult to determine from his publications. Apparently he did not publish any information about nest success, but he, perhaps with some assistance from colleagues, did find several RTHU nests.

I spent an estimated 2,500 hours to find 128 RTHU nests, which means that, on average, I spent approximately 19.5 hours in the field to find each nest. The largest number of nests I discovered on one day was 5. On most days I discovered none. Frequently, I failed to find a nest in an area where a female's activity indicated an active nest. I do not know how many active nests were present each year on my study area because I failed to detect an unknown number of active nests. These undetected nests, which could have been more difficult to

find because they were better hidden, might have had a higher success rate than the nests I found.

Another unknown is the degree of applicability of my results (from a small study area with an unlimited artificial supply of sucrose) to larger areas or to areas providing only natural food. Could the large quantities of sucrose provided by feeders lead to unnaturally high densities of nesting RTHUs, which, in turn, leads to high rates of nest failure? Are RTHU numbers increasing because of, or in spite of, the large number of RTHU feeders? Hopefully, this paper will stimulate other researchers to study some of the many aspects of RTHU nesting biology that have not been adequately studied.

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Dedication

This paper is dedicated to the memory of Alexander F. Skutch, 1904-2004, who probably spent more time studying the nesting habits of hummingbirds than has any other naturalist. Fortunately, he was also a prolific writer.

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TOS members attending the 100 year anniversary meeting at Montgomery Bell State Park had exceptional views of this Ruby-throated Hummingbird nest.

A BRIEF HISTORY OF THE CHRISTMAS BIRD COUNT IN TENNESSEE

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The Christmas Bird Count (CBC) was proposed by Frank Chapman of Bird-Lore in 1900 to "have a new kind of Christmas side hunt, in the form of a Christmas bird-census" Chapman 1900). Apparently, the first CBC in Tennessee was conducted by Miss Magnolia Woodward in 1902; she reported six species and 30 individuals plus a "colony" of crows (Trabue 1965). It was not until 1930 however that the Tennessee Ornithological Society (TOS) led an effort to provide a statewide CBC. The 1931 Tennessee CBC season consisted of 3 counts, run by 26 people and tallied 7,400 birds.

Over the following ten years TOS averaged 8 counts and an average of 61 observers per year, who recorded an average of 84 species statewide. Counts in the early 1900's were undoubtedly hampered by lack of quick and affordable transportation and poor optics as compared to today. Over time as reliable transportation became more affordable and good optics (binoculars and telescopes) became more available, observers could go farther afield to find birds, and the optics allowed them to identify species from greater distances with more certainty.

In 1965, Trabue (1965) provided a list of 172 birds that had been recorded across all counts and all years; his list, however, included subspecies as well as several birds that are no longer considered full species. The 1965 CBC included 15 counts from around the state. By 1972, the CBC season results were 17 counts, conducted by 293 observers who tallied 132 species. In 1984, there were counts in 20 locations. That same year, Tanner (1984) summarized CBC data over decades and published the frequency and abundance of 120 species from 8 CBC locations in Tennessee; in that summary, 18 species occurred on 99-100% of all counts. Peeples (2004) provided a summary of the first 75 years of the Memphis CBC and listed a total 166 species for that count.

From 2005 – 2015, the average effort for the Tennessee CBC season was 31 counts, run by 500 observers. These observers recorded an average of 154 species and 630,000 individual birds. The 2015 CBC season was the 72nd consecutive and 85th overall; no counts were conducted in 1943 because of World War II. The 2015 Reelfoot CBC recorded a new high count for a Tennessee CBC with 123 species plus 2 more during count week (3 days before or after the actual count date).

The current list of birds across all counts and all years totals 265 species, plus 6 more "count week" birds. The most common species typically found on Tennessee CBC's include Snow Goose, Mallard, Lesser Scaup, American Coot, Sandhill Crane, Ring-billed Gull, American Crow, American Robin, European Starling, and some blackbird species, whose roosts can contain upwards of a million birds.

Fifty six species have been recorded on every Tennessee CBC. They are: American Black Duck, Mallard, Ring-necked Duck, Lesser Scaup, Northern Bobwhite, Black Vulture,

Turkey Vulture, Cooper's Hawk, Red-tailed Hawk, American Coot, Killdeer, Wilson's Snipe, Mourning Dove, Eastern Screech-Owl, Barred Owl, Red-headed Woodpecker, Red-bellied Woodpecker, Yellow-bellied Sapsucker, Downy Woodpecker, Hairy Woodpecker, Northern Flicker, Pileated Woodpecker, Loggerhead Shrike, Blue Jay, American Crow, Carolina Chickadee, Tufted Titmouse, White-breasted Nuthatch, Brown Creeper, Winter Wren, Carolina Wren, Golden-crowned Kinglet, Ruby-crowned Kinglet, Eastern Bluebird, Hermit Thrush, American Robin, Brown Thrasher, Northern Mockingbird, European Starling, Cedar Waxwing, Yellow-rumped Warbler, Eastern Towhee, Field Sparrow, Savannah Sparrow, Fox Sparrow, Song Sparrow, Swamp Sparrow, White-throated Sparrow, White-crowned Sparrow, Northern Cardinal, Red-winged Blackbird, Eastern Meadowlark, Common Grackle, Brown-headed Cowbird, Purple Finch, and American Goldfinch.

Other species of note include Ruffed Grouse, which was not recorded until 1937, but has occurred on every count since except once in 1976.

Another notable change in species occurrence on Tennessee CBCs is Bewick's Wren, which occurred on every count until 1988, but only 6 times since. It was last recorded on a Tennessee CBC in 2007 and is nearly extirpated from the state.

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REPORT OF THE TENNESSEE BIRD RECORDS COMMITTEE

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This report documents the actions taken by the Tennessee Bird Records Committee (TBRC) of the Tennessee Ornithological Society from the winter of 2014 to the fall of 2015. Committee members and alternates who served through fall of 2014 were Kevin Calhoon (secretary), Mike Todd, Bill Pulliam, Don Miller, Jan Shaw and Mark Greene. Phillip Casteel was the alternate.

Beginning in winter of 2014 through fall of 2015 the committee consisted of Kevin Calhoon (secretary), Mike Todd, Mark Greene, Chris Sloan, Dan Jacobson and Phillip Casteel. David Kirschke was the alternate.

Acceptance criteria remained the same throughout the year. A species is placed on the confirmed list based upon either: (a) extant, verified specimen, photograph, or sound recording, each accompanied by written details or (b) satisfactory written documentation of three independent sight records, or satisfactory written documentation or three independent observers of the same bird. Without these levels of documentation, a species is placed on the Provisional List based on one or two sight records with satisfactory written documentation. Acceptance to either list requires no more than one dissenting vote of the committee as directed by the amended resolution at the 1998 Spring Meeting. This report contains five records: three were accepted, two were not accepted.

RESULTS OF THE TENNESSEE BIRD RECORD COMMITTEE VOTING FOR 2014 AND 2015

RECORDS ACCEPTED

Long-billed Murrelet *(Brachyramphus perdix)*
Reelfoot Lake, Lake County, 14 December, 2002
Submitted by Mark Greene (Jeff Wilson, Bob Foehring)
Accepted: votes 6-0

This record will be added to the Official List of the Birds of Tennessee as a first state record under the Provisional category since no photographs or sound recordings were made.

Inca Dove *(Columbina Inca)*
Jolly Landing, Lake County, 25 August, 2010
Submitted by Mark Greene
Accepted: votes 6-0

Ferruginous Hawk *(Buteo regalis)*
Pea Ridge Road, Lake County, 27 January, 2014
Submitted Mark Greene
Accepted: votes 6-0

RECORDS NOT ACCEPTED

Prairie Falcon *(Falco mexicanus)*
Hwy 306, Meigs County, 4 January, 2014
Submitted by Tommie Rogers (Libby Wolfe)
Not accepted: votes 4-2

The majority of the TBRC thought there were not sufficient details to eliminate other raptor species.

Black-headed Gull *(Chroicocephalus ridibundus)*
Parksville Lake, Polk County, 11 April, 2014
Submitted by Rick Houlk
Not accepted: votes 0-6

The TBRC unanimously agreed there were not enough details to eliminate Bonaparte's Gull.

OBSERVERS

The TBRC unanimously thanks everyone who took time to contribute documentation.

BOOK REVIEW

Feeding Wild Birds in America: Culture, Commerce & Conservation – Paul J. Baicich, Margaret A. Barker, and Carrol L. Henderson, 2015. Texas A & M Press, College Station, TX. 320 pages.

In *Feeding Wild Birds in America: Culture, Commerce & Conservation,* the authors have taken a unique and entertaining approach to their task of describing bird feeding in America. They start by describing a brief history of bird feeding and conservation in the late 1800's, and then they provide the reader with a decade by decade account of the evolution of feeding wild birds in the 1900's. While that in itself is fascinating, the authors have gone a bit further. Decade by decade the latest developments in bird feeding is described while also placing bird feeding into the national and global issues that defined American life at the time.

Americans, for example, were encouraged to feed birds in the early 1900's often because birds are "useful" in eating insects harmful to agriculture. While one might think that bird feeding would be less during the Great Depression of the 1930's, many people provided "a few crumbs from the table . . ." to help birds. During the prosperity of the 1950's and the post-World War II move to the suburbs for many people, seed and bird feed companies responded with more types of packaged seeds and suet. By the end of the century, nearly one-third of the North American population over 16 was involved with feeding birds. The rapid growth of people's interest in watching birds up close was followed late in the century by new technology that could capture those observations of continental bird distribution and abundance - Project FeederWatch was launched and began to compile bird feeder observations from across the country.

At the end of each chapter, the authors have included topical essays ranging from "squirrel battles" to experimentation with different types of bird seed, including nyjer and hemp, to the development of the birdbath over the decades. Scattered throughout are a multitude of pictures and figures. Among my favorite are the early 1900's sketches of feeders and backyard bird feeding scenes from magazines and Christmas cards.

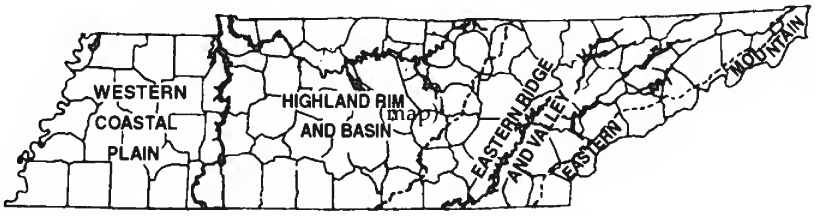
The book has an attractive cover, and along with the many pictures, it is not only a book for bird enthusiasts to read but one that everyone would enjoy skimming through.

As I read through this history, I found myself thinking of the Tennessee Ornithological Society during that time in each decade; especially how the activities of our members tracked, and often led the interest in birds nationally and are expressed in *The Migrant.* If you read one book to celebrate the TOS 100 year anniversary, I recommend this one. It provides a great perspective into our own TOS history.

Bob Ford, Brownsville, TN

THE SPRING SEASON

Richard L. Knight, Editor



1 March - 31 May 2015

Above-average ice cover on the Great Lakes again this year apparently was responsible for the influx of White-winged Scoters, Long-tailed Ducks, Common Mergansers and other diving ducks across the eastern half of the state during late February and early March. Missing, however, was a repeat of last year's Red-necked Grebe invasion. An Iceland Gull on Percy Priest Lake in mid-March was likely the same lingering individual seen at the nearby Middle Point landfill in February.

Particularly rare in spring, a Swallow-tailed Kite was observed in Perry County . A White-winged Dove in Clarksville was the third to be found in the same yard in recent years. Given the scarcity of this species in Tennessee, what are the odds of that occurrence? Western Kingbirds returned to Shelby County, and Scissor-tailed Flycatchers were seen in three regions, mainly at traditional nesting areas. Ravens nested again under the grandstands at Bristol Motor Speedway, evidently unfazed by the crowds and activities of race week in mid-April. A single Cave Swallow within a large concentration of swallows in Dyer County represented the sixth state record, five of which have been found along the Mississippi River. For the second consecutive year, wintry conditions in early March brought an invasion of American Tree Sparrows into the mid-state.

Standard Abbreviations

ad - adult
Co - County
Cr - Creek
ers - earliest reported sighting
et al. - and others
fide - reported by
im - immature
L - Lake
lrs - latest reported sighting
max - maximum count
m.ob. - many observers
Mtn - Mountain
NWR - National Wildlife Refuge
R - River
Rd - Road
SP - State Park
WMA - Wildlife Management Area
yg - young

WESTERN COASTAL PLAIN REGION - - The spring season was marked by generally mild weather, with little deviation from normal temperature and rainfall. Temperatures across the region averaged slightly cooler during all three months, although no greater than one degree. Only April showed a significant change in rainfall totals, two and a half inches below normal.

The birding highlight was a Cave Swallow found at the huge colony of Cliff Swallows nesting under the I-155 bridge in Dyer County. Other notable finds included an Anhinga and nesting Double-crested Cormorants in Gibson County within a large mixed heron rookery. Single Black-billed Cuckoos were reported from Shelby and Gibson Counties. A Redhead was an inexplicably late one-day wonder at Ensley Bottoms on 28 May.

Thanks to everyone who reported their sightings.

Waterfowl - Crane: **Black-bellied Whistling-Duck**: 6 Apr (126) Ensley (JJW), max. **Greater White-fronted Goose**: 5 Mar (130) Hatchie NWR, Haywood Co (Bob Ford); 27 Apr (1) Gibson Co (MAG), lrs. **Redhead**: 28 May (1) Ensley (Bob Foehring), lrs. **Common Loon**: 5 Apr (2) Garner L, Shelby Co (GP). **Double-crested Cormorant**: 24 Mar (10+, with 1 occupied nest) Macedonia Bottoms (MAG), first nest in county. **Anhinga**: 10 Apr - 7 May (1) Macedonia Bottoms (MAG); 22 Apr (1) Shelby Forest, Shelby Co (DDP, m.ob.). **American White Pelican**: 8 Mar (33, flying over) Shelby Co (JJW); 2 Apr (2) Pickwick L, Hardin Co (GP). **Snowy Egret**: 16 Apr (1) Dyer Co (MAG), ers. **Cattle Egret**: 10 Apr (1) Gibson Co (MAG), ers. **Black-crowned Night-Heron**: 15 May (1) Ensley (RS). **Glossy Ibis**: 15-16 Apr (1) Robinson Bayou Rd, Lake Co (Glen Criswell, MAG). **Mississippi Kite**: 16 Apr (1) Millington, Shelby Co (Georges McNeil), ers; 4 May (2) Macedonia Bottoms (MAG); 20 May (5) Paris, Henry Co (fide Shawna Ellis). **Sandhill Crane**: 16 Mar (8) Obion Co (MAG).

Stilt - Merlin: **Black-necked Stilt**: 12 Apr / 10 May (2 / 89) Ensley (JJW), ers / max; 16 Apr (2) Dyer Co (MAG). **American Avocet**: 28 Apr (4) Hatchie NWR, Haywood Co (Bob Ford). **American Golden-Plover**: 16 Mar (100+) Elam Rd, Obion Co (MAG). **Solitary Sandpiper**: 6 Apr (2) North Treatment Plant, Shelby Co (JJW), ers; 26 Apr (~200) Ensley (VBR), max. **Lesser Yellowlegs**: 26 Apr (~500) Ensley (VBR), max. **Upland Sandpiper**: 15 May (1) Ensley (RS). **Stilt Sandpiper**: 5 May (10) Ensley (JJW), max. **Dunlin**: 29 Apr / 8 May (1 / 3) Ensley (JJW / RS). **White-rumped Sandpiper**: 2 / 8 May (2 / 10) Ensley (CW / RS). **Buff-breasted Sandpiper**: 26 Apr (1) Ensley (VBR), rare in spring. **Long-billed Dowitcher**: 29 Apr (26) Ensley (JJW), max. **Wilson's Phalarope**: 27 Apr - 5 May (7-20) Ensley (DDP, m.ob.). **Herring Gull**: 15 May (1) Ensley (RS), lrs. **Lesser Black-backed Gull**: 8 Mar (1 ad) Pickwick Dam, Hardin Co (Allan Trently). **Yellow-billed Cuckoo**: 21 Apr (1) Gibson Co (MAG), ers. **Black-billed Cuckoo**: 2 May (1) Wolf R greenway, Shelby Co (RH); 4 May (1) Gibson Co (MAG). **Ruby-throated Hummingbird**: 30 Mar (1) Fayette Co (Judy Dorsey), ers. **Merlin**: 25 Apr (1) Paris, Henry Co (Shawna Ellis).

Flycatcher - Bunting: **Olive-sided Flycatcher**: 6 May (1) Lake Co (MAG). **Willow Flycatcher**: 15 May (1) Ensley (RS). **Western Kingbird**: 2 / 25 May (4 / 8) President's Island,

Shelby Co (CW / Sam Lawson); 18 May (2) North Treatment Plant, Shelby Co (RH); 19 May (3) Ensley (DDP). **Scissor-tailed Flycatcher**: 15 May (1) President's Island, Shelby Co (RS). **Warbling Vireo**: 16 Apr (1) Lake Co (MAG), ers. **Fish Crow**: 24 Mar (12+) Macedonia Bottoms (MAG). **Northern Rough-winged Swallow**: 16 Mar (1) Crockett Co (MAG), ers. **CAVE SWALLOW**: 14 May (1) Mississippi R, Dyer Co (MAG), 6th state record and 2nd in spring. **Lapland Longspur**: 2 Mar (5) Gibson Co (MAG). **Louisiana Waterthrush**: 15 Mar (1) Shelby Co (GP), ers. **Prothonotary Warbler**: 27 Mar (1) Wolf R greenway, Shelby Co (RH), ers. **Yellow-throated Warbler**: 25 Mar (1) Fayette Co (Allan Trently), ers. **Canada Warbler**: 15 May (1) Shelby Farms, Shelby Co (DDP). **Lark Sparrow**: 7 Apr (1) Riverport Rd, Shelby Co (RH); 1 May (10 at 8 sites) Gibson Co (MAG); 11 May (3) Carroll Co (Mike Todd). **Grasshopper Sparrow**: 16 Apr (1) Lake Co (MAG), ers. **Lincoln's Sparrow**: 6 May (1) Lake Co (MAG). **Blue Grosbeak**: 17 Apr (1) Shelby Co (Georges McNeil), ers. **Painted Bunting**: 27 Apr / 9 May (1 male / 1 male + 2 females) Ensley (DDP / RH).

Locations: Ensley - Shelby Co; Macedonia Bottoms - Gibson Co.

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HIGHLAND RIM AND BASIN REGION -- Weather this spring in Middle Tennessee started out with a snowstorm on 5 March. After a brief cold spell, temperatures and precipitation for the month ended up about normal. April had both temperatures and rainfall that were higher than normal. May was warmer and drier than normal. Highlights this spring included lingering White-winged Scoters, Long-tailed Duck, Red-throated Loon, and Iceland Gull. Also noteworthy were Glossy Ibis, Swallow-tailed and Mississippi Kites, Wilson's Phalarope, multiple American Tree Sparrows, and a Yellow-headed Blackbird.

Goose - Pelican: **Greater White-fronted Goose**: 9-13 Mar (3) Eagleville (SZ); 9 Mar (1) Warren Co (SNM); 9 Mar (1) Clay Co (Terry Campbell); 15 Mar (113) Duck R Unit (RS, SR, CR); 15 Mar (1) Lawrence Co (Damien Simbeck). **Snow Goose**: 7 Mar (1) Rutherford Co (TJW); 8 Mar (10) Coffee Co (Dale Swant); 8 Mar (18) Putnam Co (Michele Ramsey); 11 Mar (29) Fort Campbell (DMo); 15 Mar (2) Duck R Unit (RS, SR, CR). **Ross's Goose**: 12 Mar (13) Duck R Unit (refuge personnel); 29 Mar (2) Robertson Co (Melinda Welton); 10 Apr - 9 May (1) Old Hickory L (Chris Sloan). **Cackling Goose**: 6-7 Mar (5) Dunbar Cave SP, Montgomery Co (Joe Hall); 8 Mar (12) Duck R Unit (RS). **Mute Swan**: 8 Mar (5) Duck R Unit (RS), apparent recent arrivals. **Greater Scaup**: 3 Mar (5) Woods Reservoir (SNM, NPM); 8 Mar (2) Percy Priest L (PDC, MS); 9 Mar (7) Edgar Evins SP, DeKalb Co (Mark Taylor); 11 Mar (1) Clay Co (Terry Campbell). **White-winged Scoter**: 1-15 Mar (11-2) Percy Priest L (Jim Arnett, FF, PDC, MS); 6 Mar (4) Old Hickory L, Wilson Co portion (SZ); 8 Mar (19) Normandy L, Coffee Co (Judy Vickery); 8 Mar (2) Woods Reservoir (Kristy Baker); 20 Mar (4) Duck R Unit (Chris Agee). **Long-tailed Duck**: 5-14 Mar (1-3) Old Hickory L, Wilson Co portion (Pam Haas, m.ob.). **Common Merganser**: 3 Mar (10)

Woods Reservoir (SNM, NPM); 7 Mar (6) Percy Priest L (SZ). **Red-throated Loon**: from Feb - 16 Mar (1-2) Percy Priest L (RHC, FF); 3 Mar (1) Woods Reservoir (SNM, NPM). **Pacific Loon**: 3 Mar (1) Woods Reservoir (SNM, NPM). **Eared Grebe**: 2-3 Mar (1) Percy Priest L (Jim Arnett, PDC, m.ob.). **American White Pelican**: 7 Mar (34) Mousetail Landing SP, Perry Co (RS); 7-8 Mar (40+) Dyson Ditch, Cheatham Co (Jim Coffroth, m.ob.); 14 Mar (30) Old Hickory L, Sumner Co portion (Clay Gascoigne); 17 / 24 Mar (75 / 50) Percy Priest L, Rutherford Co portion (SZ).

Bittern - Crane: **American Bittern**: 1 Mar (1) marsh on Walter S. Davis Blvd, Nashville (PDC, MS, photo); 20 Mar (1) Shelby Bottoms (Jim Arnett); 7 / 25 Apr (1) Duck R Unit (refuge personnel / RS); 11 Apr (2) Perry Co (RS). **Cattle Egret**: 9 Apr (4) Franklin Co (Dale Swant), ers. **Yellow-crowned Night-Heron**: 29 Mar (3) Discovery Center, Murfreesboro (CW), ers. **Glossy Ibis**: 25 Apr - 3 May (1) Duck R Unit (RS, m.ob.). **Mississippi Kite**: 3 May (1) Duck R Unit (RS, m.ob.); 20 May (1) Sumner Co (ES); 27 May (2) Palmyra, Montgomery Co (SY); 30 May (1) Maury Co (WMP). **Swallow-tailed Kite**: 18 May (1) Perry Co (Ruth Schrock, RS). **Golden Eagle**: 2-6 / 23 Mar (1 im) Fort Campbell (DMo). **Sandhill Crane**: 2 Mar (110) Montgomery Co (Joe Hall); 2 Mar (12) Cedars of Lebanon SP, Wilson Co (Melissa Turrentine); 7 Mar (4500+) White Co (Doug Downs); 8 Mar (42) Cheatham Co (DMo); 9 Mar (24) Eagleville (SZ); 12 Mar (31) Robertson Co (Tony Lance); 29 Apr (1) DeKalb Co (Judy Fuson); 3 May (1) Coffee Co (Dale Swant).

Stilt - Tern: **Black-necked Stilt**: 2 / 14 May (1 / 3) Duck R Unit (CW / SR, CR). **American Avocet**: 17 Apr (3) Duck R Unit (refuge personnel). **Black-bellied Plover**: 21 May (5) Coffee Co (CW). **American Golden-Plover**: 15 Mar (1) Duck R Unit (RS), ers; 14 Apr (2) Bell's Bend (FF); 3 May (2) Duck R Unit (RS, m.ob.), lrs. **Semipalmated Plover**: 7 May (120) Duck R Unit (RS), max. **Willet**: 2 May (6) Duck R Unit (CW); 3 May (89) Liberty Marina, Clarksville (Joe Hall, SY); 3 May (21) southwest Grundy Co (Dale Swant); 7 / 14 May (1) Duck R Unit (RS / SR, CR); 9 May (7) Old Hickory L (Jim Arnett, m.ob.). **Stilt Sandpiper**: 14 May (5) Duck R Unit (SR, CR). **Sanderling**: 18 May (1) Old Hickory L (MS). **Dunlin**: 7 / 14 May (4 / 10) Duck R Unit (RS / SR, CR); 21-22 May (3) Coffee Co (CW / SZ). **White-rumped Sandpiper**: 3-11 May (1-9) Duck R Unit (RS, m.ob.). **Short-billed Dowitcher**: 15 Apr (2) Bell's Bend (Chris Agee); 26 Apr / 7 May (1) Duck R Unit (SZ, SY / RS); 12 May (12) marsh on Walter S. Davis Blvd, Nashville (FF); 12 May (8) Percy Priest Field Trial Area, Rutherford Co (SZ). **Wilson's Phalarope**: 28 Apr (1) Old Hickory L (Robert Crenshaw, photo); 10 May (1) Duck R Unit (CW). **Laughing Gull**: 15 Mar (1) Duck R Unit (RS). **Franklin's Gull**: 18 May (1) Old Hickory L (PDC, MS). **Lesser Black-backed Gull**: 8 Mar (1 im) Duck R Unit (RS); 16 / 25 Apr (1 ad) Old Hickory L (SZ / PDC, MS). **ICELAND GULL**: 13-14 Mar (1 im) Seven Points Recreation Area, Percy Priest L (RHC / MS, PDC), undoubtedly the same bird as seen at landfill in Rutherford Co in Feb. **Black Tern**: 10 May (1) Duck R Unit (CW); 21 May (6) Old Hickory L (PDC, MS).

Dove - Longspur: **White-winged Dove**: 14 Apr (1) Clarksville (Mike O'Malley). **Black-billed Cuckoo**: 2 May (2) Perry Co (fide RS). **Short-eared Owl**: 23 Mar (1) Overton Co

(SJS). **Chimney Swift**: 26 Mar (1) Murfreesboro (CW), ers. **Ruby-throated Hummingbird**: 31 Mar (1) DeKalb Co (Tommie Curtis, Virginia Curtis), ers. **Merlin**: 5 / 15 Mar (1) Smith Co (Chris Agee); 13 Mar (2) Perry Co (RS); 13 Mar (1) Rutherford Co (SZ); 16 Apr (1) Robertson Co (Charlie Muise); 24 Apr (1) Perry Co (RS). **Peregrine Falcon**: 27 Mar (1) Rutherford Co (SZ, Jack Zipperer). **Yellow-bellied Flycatcher**: 15 May (1) Fort Campbell (DMo); 17 May (1) Shelby Bottoms (TJW). **Alder Flycatcher**: 19 May (2) Fort Campbell (DMo). **Willow Flycatcher**: 27 Apr (1) Duck R Unit (SR, CR), ers. **Scissor-tailed Flycatcher**: 5 / 21 Apr (1 / 2) Wartrace, Bedford Co (SZ); 2 May (1) Murfreesboro (Kristy Baker); 9-30 May (1) Cheatham Dam, Cheatham Co (Joe Stone, Jerry Drewry, m.ob.), first for county ; 24 May (6) Lytle Cr Rd area, Rutherford Co (CW). **Loggerhead Shrike**: 7 Mar (1) DeKalb Co (John O'Barr); 8 Mar (1) Shelbyville airport, Bedford Co (SZ); 9 Mar (2) Eagleville (SZ); 17 May (3) Coffee Co (CW); 24 May (7, including yg) Couch Rd, Rutherford Co (CW); 31 May (2 pair + 1 ad) 3 sites Warren Co (SNM). **Bell's Vireo**: 29 Apr (1) Fort Campbell (DMo). **Warbling Vireo**: 16 Apr (2) Old Hickory L (SZ), ers. **Philadelphia Vireo**: 22 Apr (1) Radnor L (NTOS), ers. **Fish Crow**: 28 Apr (1) Woods Reservoir (CW), distinctive "unh-uh" call heard. **Tree Swallow**: 8 Mar (6) Duck R Unit (RS), ers. **Barn Swallow**: 15 Mar (1) Duck R Unit (RS), ers. **Sedge Wren**: 7 Apr (2) Duck R Unit (SY). **Marsh Wren**: 25 Apr (1) Duck R Unit (RS). **Bewick's Wren**: 8-12 May (1) Alsup Mill Rd, Wilson Co (TJW, m.ob.). **Blue-gray Gnatcatcher**: 2 Apr (1) Radnor L (Jim Arnett), ers. **American Pipit**: 10 May (1) Duck R Unit (CW), lrs. **Lapland Longspur**: 8 Mar (70) Duck R Unit (RS).

Warblers: **Ovenbird**: 12 Apr (1) Murfreesboro (CW), ers. **Worm-eating Warbler**: 8 Apr (1) Beaman Park, Davidson Co (Durwood Edwards), ers. **Louisiana Waterthrush**: 12 Mar (1) Lewis Co (WMP), ers. **Blue-winged Warbler**: 9 Apr (1) Lincoln Co (Evan Buck), ers. **Golden-winged Warbler**: 20 Apr (1) Cookeville (SJS), ers; 2 / 4 May (1) Radnor L (MS / JKS). **Prothonotary Warbler**: 11 Apr (2) Radnor L (FF, JKS), ers. **Swainson's Warbler**: 30 Apr / 2 May (1) Radnor L (FF / MS, PDC). **Tennessee Warbler**: 11 Apr (1) Murfreesboro (CW), ers. **Nashville Warbler**: 6 Apr (1) Perry Co (RS), ers. **Connecticut Warbler**: 17-22 May (1) Shelby Bottoms (MS, m.ob.). **Mourning Warbler**: 4 May (1) Radnor L (JKS); 10 May (1) Duck R Unit (CW); 15 May (1) Fort Campbell (DMo); 17 May (1) Shelby Bottoms (MS); 18 / 21 May (1) Nashville (Kevin Bowden). **Kentucky Warbler**: 15 Apr (1) Radnor L (NTOS), ers. **Common Yellowthroat**: 6 Apr (1) Perry Co (RS), ers. **Hooded Warbler**: 6 Apr (2) Perry Co (RS), ers. **Cerulean Warbler**: 8 Apr (1) Edgar Evins SP, DeKalb Co (Mark Taylor), ers. **Northern Parula**: 26 Mar (1) Williamson Co (Melinda Welton), ers. **Blackburnian Warbler**: 17 Apr (3) Narrows of the Harpeth SP, Cheatham Co (ES), ers. **Yellow Warbler**: 7 Apr (1) Montgomery Co (SY), ers. **Blackpoll Warbler**: 31 May (1) Lawrence Co (WMP), lrs. **Black-throated Blue Warbler**: 30 Apr / 5 May / 13 May (1 male) Radnor L (FF / RHC / NTOS). **Prairie Warbler**: 6 Apr (6) Perry Co (RS) and (1) Montgomery Co (SY), ers. **Black-throated Green Warbler**: 27 Mar (2) Radnor L (ES), ers. **Wilson's Warbler**: 5-13 May (1) Radnor L (FF, m.ob.); 19 May (1) Nashville (Kevin Bowden); 22 May (1) Shelby Bottoms (FF).

Sparrow - Siskin: **Bachman's Sparrow**: 24 Apr / 3 May (1) Fort Campbell (DMo et al.).

American Tree Sparrow: 5 Mar (1) Hendersonville, Sumner Co (Ken Oeser); 5-10 Mar (1-2) Bellvue, Davidson Co (FF); 5-6 Mar (1) Rockvale, Rutherford Co (Kristy Baker, photo); 5-10 Mar (1-2) Centerville, Perry Co (RS); 5 Mar (1) Wilson Co (Pam Haas); 6 Mar (1) Lylewood Rd, Montgomery Co (Joe Hall); 8 Mar (6) Lake Teal, Montgomery Co (SR, CR); 8 Mar (2) Duck R Unit (RS, Alan Troyer); 11 Mar (1) Fort Campbell (DMo). **Vesper Sparrow**: 20 Mar (1) Perry Co (RS), ers; 4 Apr (15 at several sites) Robertson Co (Tony Lance), max. **Lark Sparrow**: 7 / 16 Apr (1 each) separate sites Perry Co (RS); 25 Apr / 3 May (1) Duck R Unit (RS); 28 Apr - 17 May (1-2) Sam Brashear Rd, Coffee Co (CW); 26 May (1) Franklin Co (Damien Simbeck). **Henslow's Sparrow**: 7 Apr (19) Fort Campbell (DMo); 17 May (3+) Bark Camp Barrens WMA, Coffee Co (CW); 26 May (1) Fort Campbell, Stewart Co portion (DMo). **Le Conte's Sparrow**: 23 Apr (1) Fort Campbell (DMo). **Lincoln's Sparrow**: 13 Apr (1) Duck R Unit (RS); 29 Apr (1) Fort Campbell (DMo). **Summer Tanager**: 12 Apr (1) Murfreesboro (CW), ers. **Scarlet Tanager**: 8 Apr (1) Davidson Co (Durwood Edwards), ers. **Blue Grosbeak**: 12 Apr (1) Rutherford Co (SZ), ers. **Indigo Bunting**: 8 Apr (1) Lincoln Co (Evan Buck), ers. **Dickcissel**: 17 Apr (1) Bedford Co (Melissa Turentine), ers. **Bobolink**: 29 Apr (2) Bell's Bend (Lynnann Welch), ers; 12 May (30) Warren Co (SNM), max; 20 May (14) Fort Campbell (DMo), lrs. **Yellow-headed Blackbird**: 22 Apr (1) West Gallatin, Wilson Co (SR, CR). **Rusty Blackbird**: 25 Apr (18) Peeler Park, Davidson Co (PDC, MS), lrs. **Brewer's Blackbird**: 20 Mar (1) Hardin Bottoms, Perry Co (RS). **Baltimore Oriole**: 20 Apr (1) Radnor L (JKS), ers. **Purple Finch**: 27 Mar (135, at feeders) Warren Co (SNM), max. **Pine Siskin**: notable influx in mid-to-late Apr; 25 Apr (40) Lawrence Co (Donette Sellers), max.

Locations: Bell's Bend - Davidson Co; Duck R Unit - unit of Tennessee NWR, Humphreys Co; Eagleville - Rutherford Co; Fort Campbell - Montgomery Co (unless specified otherwise); Old Hickory L - Davidson Co (unless specified otherwise); Percy Priest L - Davidson Co (unless specified otherwise); Radnor L - Davidson Co; Shelby Bottoms - Davidson Co; Woods Reservoir - Franklin Co.

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CUMBERLAND PLATEAU / RIDGE and VALLEY REGION - - March began with a brief cold snap, but finished with near normal temperatures overall. April and May were both slightly warmer than normal. Rainfall was above average in March and April, but well below average in May.

Following a good showing in late winter, notable numbers of diving ducks continued into early March, particularly Canvasback, Redhead, Greater Scaup, White-winged Scoter, and Common Merganser. A fallout of ducks on 6 March added to the numbers already present. John Sevier Lake in Hawkins County continued to attract a variety of unusual birds, including a stunning female Anhinga in early May. A Least Bittern at Phipps Bend was noteworthy; also, a Least Bittern was seen at Standifer Gap Marsh after an absence of a

year or two. Shorebird numbers were poor, especially outside the Chattanooga area. Three reports of Black-billed Cuckoo were notable. Warbler migration seemed stronger in the Chattanooga area than in the Tri-cities region. Purple Finches and Pine Siskins lingered from the winter in moderate numbers.

Problems at Boone Dam forced a drastic water level change for the spring and summer. A sink hole near the base of the dam was found in October and filled; however, seepage beneath the earthen portion of the dam was detected shortly thereafter. As a safety precaution, TVA lowered the water in Boone Lake to levels about 10 feet below the normal winter drawdown. Difficulties in fixing the seepage problem resulted in this drawdown being maintained throughout the spring and summer. This lower water level, roughly 30-35 feet below normal summer full pool, impacted lakeshore businesses, homes, and boat launch sites. Also affected were several birding areas along the lakeshore, particularly at Austin Springs which was left largely high and dry. In July it was announced by TVA that the water level would remain at this greatly reduced level for five to seven years as the dam is repaired. This will be the agency's largest and costliest dam repair project.

Waterfowl: **Greater White-fronted Goose**: from Feb - 3 Mar (27) John Sevier L (SHu), with 1-2 lingering until 3 May; 6 Mar (5) Washington Co (BP, JP, RRK); Mar thru May (1) Hamilton Co (KAC, DRJ). **Snow Goose**: 1-9 Mar (1) Cherokee Farm, Knox Co (SHo, m.ob.); 5 Mar (1) Bristol (JWC); 14 Mar (9) Mohawk, Greene Co (Wade GeFellers); Mar thru May (1) Hamilton Co (KAC, DRJ). **Ross's Goose**: 1-9 Mar (1) Cherokee Farm, Knox Co (SHo, m.ob.); 7-9 Mar (1) Kingsport (FRC, RLK). **Cackling Goose**: 1-9 Mar (1) Cherokee Farm, Knox Co (SHo, m.ob.). **American Wigeon**: thru May (2) Washington Co (RLK, m.ob.), lrs. **Canvasback**: from Feb - 9 Mar (17-67) John Sevier L (SHu); from Feb - 10 Mar (6-15) Paddle Cr pond (RLK, RMC, m.ob.); 2 Mar (150+) Chickamauga L (SZ); 3 Mar (18) South Holston R, eastern Sullivan Co (RLK); 3-10 Mar (3-19) Middlebrook L, Sullivan Co (RRK, JWC, m.ob.); 5 Mar (9) Bristol (JWC); 9-12 Mar (9) Johnson City (RLK); 15 Mar (2) Bible Refuge (Ken Oeser). **Redhead**: from Feb - 17 Mar (20-70) John Sevier L (SHu); 6 Mar (970 at 5 sites) Sullivan Co (RLK), new high count in NE TN; 7 Mar (40) Greene Co (Ben Britton); 2 May (3) Rankin Bottoms (MBS), lrs. **Greater Scaup**: from Jan - 10 Mar (3) Paddle Cr pond (RMC, RLK, m.ob.); from Feb - 9 Mar (19-22) Kingsport (RLK); 5-17 Mar (4-10) John Sevier L (SHu); 9 Mar (18) Chickamauga L (BD). **Lesser Scaup**: 6 Mar (240) Boone L (RLK), max. **Surf Scoter**: from Feb - 7 Mar (2) Chickamauga L (m.ob.); 2 Mar (1) Melton Hill L, Anderson Co (Chuck Estes). **White-winged Scoter**: 2 Mar (1-2) Melton Hill L, Anderson Co (Chuck Estes / Melinda Fawver); 3 Mar (5) Douglas L (KW); 6 Mar (8) Boone L (RLK); 7-20 Mar (1-2) Nickajack L, Marion Co (Kristy Baker, photo); 20 Mar (1) John Sevier L (SHu). **Common Goldeneye**: 3 Mar (15) Douglas L (KW). **Common Merganser**: from Feb - 8 Mar (1-2) Boone L (RMC, m.ob.); from Feb - 5 Mar (3) Middlebrook L, Sullivan Co (RLK, DK); from Feb - 10 Mar (2-36) John Sevier L (SHu); 1 Mar (4) Douglas L, Sevier Co portion (KW, Chris Myers); 3 Mar (2) Steele Cr Park, Sullivan Co (Larry McDaniel); 7 Mar (1) Kingsport (FRC). **Red-breasted Merganser**: 3 Mar (10) John Sevier L (SHu); 3 Mar (18) Douglas L (KW); 6 Mar (40) Boone L (RLK).

Loon - Gallinule: **Red-throated Loon**: 2 / 9-20 Mar (7 / 2) Chickamauga L (BD, m.ob.). **Pacific Loon**: 5 Apr (1) Watts Bar L, Meigs Co portion (RDH, DMy). **Common Loon**: 5 Apr (53) Watts Bar L, Meigs Co portion (RDH, DMy), max. **Horned Grebe**: 3 Mar (190) Douglas L (KW), max. **Red-necked Grebe**: 11 Apr (2) pond on Bridge Burners Blvd, Greene Co (Drew Dickert), first county record. **Double-crested Cormorant**: 1 Apr - 26 May (2 nests, with 3 yg each on latter date) Kingsport (RLK); 2 Apr (93 nests) island in Emory R, near Kingston Steam Plant, Roane Co (RDH, DMy); 2 May (5 nests) Rankin Bottoms (MBS). **ANHINGA**: 5 May (1 female) John Sevier L (Mike Hubley, SHu, photo), northeastern most of five east TN records , all since 1987. **American White Pelican**: 5-9 Mar (24) Chickamauga L (BD); 14 Mar (~ 140) Tennessee R, Meigs Co (Charles Murray). **American Bittern**: 23 / 29 Apr (2) Standifer Gap Marsh (KAC, DRJ). **Least Bittern**: 29 May (1) Phipps Bend (Rick Phillips); 30 May (1) Standifer Gap Marsh (DRJ, KAC). **Great Egret**: 30 Mar (1) Pickett SP, Pickett Co (Michael Hodge), few records there. **Little Blue Heron**: 29 Apr (1 ad) Brainerd Levee (BD); late May (3 ad, 2 on nests) Barker Island in Watts Bar L, Rhea Co portion (Chris Agee, photo), in large mixed heronry. **Cattle Egret**: 18 May (1) John Sevier L (DK); 30 May (1) Loudon Co (RDH, DMy). **Green Heron**: 7 Apr (1) Rankin Bottoms (MBS), ers. **Yellow-crowned Night-Heron**: late Apr thru May (3 nests at 2 sites) Kingsport (Bill Grigsby); 22 May (1) Bristol (FRC). **Osprey**: 4 Mar (1) Bradley Co (John Champion, photo), ers; 7 Mar (1) Kingsport (FRC), new early arrival date in NE TN. **Bald Eagle**: 28 Apr (21) Rankin Bottoms (MBS), notable concentration feeding on spawning carp. **Broad-winged Hawk**: 2 Apr (2) Lookout Mtn (BD) and (2) Caryville, Campbell Co (NeM), ers. **Virginia Rail**: 9 / 25 Mar, 3 May (1-4) Standifer Gap Marsh (TLR, m.ob.); 18 Mar / 6 Apr (1) Meadowview golf course, Kingsport (RLK). **Common Gallinule**: 3-5 May (2) John Sevier L (SHu).

Plover - Falcon: **American Golden-Plover**: 29 Mar (1) near Chattanooga airport, Hamilton Co (KAC, DRJ et al.). **Semipalmated Plover**: 19 Apr (1) Moccasin Bend, Hamilton Co (KAC), ers. **Greater Yellowlegs**: 11 Mar (1) Camp Jordan, Hamilton Co (BD), ers. **Lesser Yellowlegs**: 2 May (64) Rankin Bottoms (MBS), max. **Dunlin**: 22 May (11) near Pelham, Grundy Co (SZ). **Least Sandpiper**: 10 Mar (1) Camp Jordan, Hamilton Co (BD), ers. **White-rumped Sandpiper**: 14 May (1) Brainerd Levee (KAC et al.). **Pectoral Sandpiper**: 12 Mar (2) Standifer Gap Marsh (BD), ers. **Bonaparte's Gull**: 7 Apr (400) Rankin Bottoms (MBS), new high count . **Herring Gull**: 14 May (1) Chickamauga L (BD), lrs. **Caspian Tern**: 10 Apr (1) John Sevier L (SHu), ers. **Forster's Tern**: 8 Apr (1) Raccoon Mtn pumped storage lake, Marion Co (TLR), ers. **Yellow-billed Cuckoo**: 21 Apr (1) John Sevier L (SHu), ers. **Black-billed Cuckoo**: 26 Apr (1) John Sevier L (SHu); 29 Apr (1) Norris Dam, Anderson Co (Chuck Estes); 23 May (1) Bristol (RMC). **Barn Owl**: 15 Mar (3) Bible Refuge (Ken Oeser); 9 May (1) Paddle Cr pond (JWC). **Eastern Whip-poor-will**: 31 Mar (1) Craven's House (BD), ers. **Chimney Swift**: 29 Mar (2) Brainerd Levee (KAC, DRJ et al.), ers. **Ruby-throated Hummingbird**: 3 Apr (1) Knox Co (John Skaggs), ers. **Merlin**: thru 16 Mar (1) Standifer Gap Marsh (Hugh Barger), continuing ; 3 Mar (1) Bristol (RMC); 2 May (1) Chattanooga Nature Center (KAC); 17 May (1) Hamilton Co (Hugh Barger). **Peregrine Falcon**: 18 Mar (1) Hamilton Co (KAC).

Flycatcher - Longspur: **Olive-sided Flycatcher**: 9 May (1) Cross Mtn, Campbell Co (Chris Welsh). **Acadian Flycatcher**: 19 Apr (1) Craven's House (KAC), ers. **Great Crested Flycatcher**: 8 Apr (1) Greenway Farm (DA), ers. **Scissor-tailed Flycatcher**: returned to traditional nesting sites in the Sequatchie Valley portion of Bledsoe Co and at South Pittsburg, Marion Co (fide KAC). **Loggerhead Shrike**: thru season (1-2) Washington Co (RLK, m.ob.); 28 Apr (1) Grundy Co (CW); 29 Apr (2) Hamilton Co (KAC, DRJ); 30 May (1) Loudon Co (RDH, DMy); 30 May (1) Meigs Co (Charles Murray). **White-eyed Vireo**: 30 Mar (1) Greenway Farm (DA), ers. **Yellow-throated Vireo**: 31 Mar (1) Lookout Mtn (BD), ers. **Blue-headed Vireo**: 20 Mar (1) Sequatchie Co (Clyde Blum), ers. **Warbling Vireo**: 17 Apr (1) Washington Co (RLK), ers; 29 Apr (1) Craven's House (KAC, DRJ), rare in Hamilton Co; 22 May (12) Leesburg and Bowmantown, Washington Co (RLK), max; thru May (1-4 at 8 additional sites) Sullivan and Washington Cos (m.ob.). **Red-eyed Vireo**: 6 Apr (1) Craven's House (KAC), ers. **Fish Crow**: 16 Mar (5) Alcoa, Blount Co (Tom Howe). **Common Raven**: 23 Mar (2) Bowmantown, Washington Co (RRK); 6 Apr (1) Boone's Cr, Washington Co (RLK); 13 Apr - 25 May (active nest, with 2-3 yg in mid-May) under grandstands at Bristol Motor Speedway (Michelle King, JWC, m.ob.), second nest there in last 3 years. **Purple Martin**: 9 Mar (2) Ooltewah, Hamilton Co (David Stone), ers. **Northern Rough-winged Swallow**: 19 Mar (2) Hamilton Co (BD), ers. **Cliff Swallow**: 29 Mar (4) Hamilton Co (BD), ers. **Barn Swallow**: 19 Mar (1) Hamilton Co (BD), ers. **Marsh Wren**: 29 Apr (1 each) Brainerd Levee / Standifer Gap Marsh (KAC, DRJ). **Blue-gray Gnatcatcher**: 29 Mar (1) Hamilton Co (TLR, Libby Wolfe), ers. **Wood Thrush**: 7 Apr (1) Chattanooga Nature Center (TLR), ers. **American Pipit**: 9 May (1) Paddle Cr pond (RBB), lrs. **Lapland Longspur**: 2 Mar (1) Limestone, Washington Co (RRK), lrs at only regional wintering site.

Warblers: **Worm-eating Warbler**: 8 Apr (1) Greenway Farm (DA), ers. **Blue-winged Warbler**: 11 Apr (1) Lookout Mtn (TLR et al.), ers. **Golden-winged Warbler**: 26 Apr (1) Craven's House (KAC); 3 May (1) Phipps Bend (David Cassel). **Black-and-white Warbler**: 26 Mar (1) Craven's House (Nick Siler), ers. **Prothonotary Warbler**: 11 Apr (2) Phipps Bend (David Cassel), ers. **Swainson's Warbler**: 20 Apr (1) Craven's House (KAC). **Tennessee Warbler**: 18 Apr (1) Chattanooga Nature Center (KAC et al.), ers. **Orange-crowned Warbler**: 11 - 19 Apr (3 reports) Hamilton Co (DA, TLR, KAC); 25 Apr (1) Knox Co (KDE). **Nashville Warbler**: 14 Apr (1) Lookout Mtn (TLR), ers. **Connecticut Warbler**: 9 May (1) Craven's House (KAC); 12 May (2, banded) TN River Gorge, Marion Co (Lizzie Goodrich, John Diener, photo); 13 May (1 - found dead) Chattanooga (DA). **Mourning Warbler**: 3 May (1) Knox Co (KDE); 10 May (1) Craven's House (DRJ). **Kentucky Warbler**: 16 Apr (1) Johnson City (RLK), ties early arrival date in NE TN. **Common Yellowthroat**: 4 Apr (1) Chattanooga Nature Center (KAC et al.), ers. **Hooded Warbler**: 6 Apr (6) Craven's House (KAC), ers. **Cerulean Warbler**: 11 Apr (1) Craven's House (TLR et al.), ers. **Northern Parula**: 4 Apr (1) Chattanooga Nature Center (KAC et al.), ers. **Blackburnian Warbler**: 19 Apr (1) Craven's House (KAC), ers. **Black-throated Blue Warbler**: 26 / 29 Apr (1 / 2) Craven's House (Clint Ball / KAC, DRJ), becoming more frequent in Chattanooga area. **Yellow-throated Warbler**: 29 Mar (2) Marion Co (TLR, Libby Wolfe), ers. **Prairie Warbler**:

6 Apr (2) Raccoon Mtn, Marion Co (TLR), ers. **Black-throated Green Warbler**: 31 Mar (2) Lookout Mtn (BD), ers. **Wilson's Warbler**: 13 May (1) Kingsport (RLK); 14 May (1) Craven's House (KAC).

Sparrow - Siskin: **Vesper Sparrow**: 21 Mar (1) Bible Refuge (Ben Britton). **Henslow's Sparrow**: 9 May (3) Hwy 62, east of Monterey, Putnam Co (SJS). **Summer Tanager**: 11 Apr (1) Lookout Mtn (TLR et al.), ers. **Scarlet Tanager**: 8 Apr (1) Greenway Farm (DA), ers. **Rose-breasted Grosbeak**: 19 Apr (1) Craven's House (KAC), ers. **Blue Grosbeak**: 12 Apr (1) Bledsoe Co (Chandler Hendrick), ers. **Dickcissel**: 9 May (1) Riverside Rd, Sullivan Co (JWC); 30 May (1) Loudon Co (RDH, DMy). **Orchard Oriole**: 10 Apr (1) John Sevier L (SHu), ers. **Baltimore Oriole**: 12 Apr (1) Chattanooga (DRJ, TLR et al.), ers. **Purple Finch**: after fair to moderate winter numbers, there were several reports of lingering birds thru late Apr; 14 May (1) Knox Co (KDE), lrs. **Pine Siskin**: after moderate winter numbers, there were several reports of lingering birds into May; 26 May (1) Knox Co (KDE), lrs.

Locations: Bible Refuge - Greene Co; Boone L - Washington and Sullivan Cos; Brainerd Levee - Hamilton Co; Bristol - Sullivan Co; Chattanooga Nature Center - Hamilton Co; Chickamauga L - Hamilton Co; Craven's House - unit of Chickamauga and Chattanooga National Military Park - Hamilton Co; Douglas L - Jefferson Co (unless specified otherwise); Greenway Farm - Hamilton Co; John Sevier L - Hawkins Co; Kingsport - Sullivan Co; Lookout Mtn - Hamilton Co; Paddle Cr pond - Sullivan Co; Phipps Bend - Hawkins Co; Rankin Bottoms - Cocke Co; Standifer Gap Marsh - Hamilton Co.

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EASTERN MOUNTAIN REGION - - The period had above average temperatures in each month - 2 degrees above average for March, 3 degrees for April, and 5 degrees for May . Precipitation was above normal in March and April, while May was dry with only 0.7 inch of rain which was more than 3 inches below normal.

A cold front that passed through the region on 5 - 6 March caused a significant waterfowl fallout. Northern Pintail, Greater Scaup, and White-winged Scoter were found in record numbers for the area. A female Common Merganser lingered through the period in Carter County. Observations of Double-crested Cormorants continue to increase, including the first nesting record from the mountain region at Watauga Lake. The behavior of a pair of Peregrine Falcons in Doe River Gorge suggested nesting was underway, but the birds vanished by early May. This made three of the last four years in which a pair was present at this site in spring, but with apparent failed nesting attempts. Meanwhile, nesting continued at a site in the Smokies occupied by Peregrines for nearly two decades.

Waterfowl: **Northern Shoveler**: 5 Mar (27) Watauga Dam (TSM, BP, JP), max. **Northern Pintail**: 5 Mar (6) Watauga Dam (TSM, BP, JP); 6 Mar (38) South Holston L (RLK), new

high count in NE TN. **Canvasback**: thru 5 Mar (9) Watauga R (m.ob.); 5 Mar (13) Watauga Dam (TSM, BP, JP); 7 Mar (1) Cades Cove, GSMNP (WB). **Redhead**: 5 Mar (20) Watauga R and (120) Watauga Dam (TSM, BP, JP). **Ring-necked Duck**: 5 Mar (210) Watauga Dam (TSM, BP, JP) and (400+) South Holston L (RMC) and (57) Erwin, Unicoi Co (TSM). **Greater Scaup**: 5 Mar (318) Watauga Dam (TSM, BP, JP), six times higher than previous high count in NE TN.; 5 Mar (3) Erwin, Unicoi Co (TSM); 6-8 Mar (10-14) South Holston L (RLK). **Lesser Scaup**: 5 Mar (70) Watauga Dam (TSM, BP, JP); 6 Mar (220) South Holston L (RLK). **White-winged Scoter**: 1-21 Mar (max 30 on 12 Mar) South Holston L (RLK, DK, PGR, Steve Calver, m.ob.), new high count for NE TN. **Black Scoter**: 10-14 Mar (1 im male) South Holston L (RRK, Gil Derouen, Reece Jamerson, Charles Moore, m.ob.). **Long-tailed Duck**: 28 Feb - 6 Mar (12) South Holston L (RLK, m.ob.). **Common Goldeneye**: 8 Mar (5) South Holston L (RLK), max. **Common Merganser**: 2 Mar (23) Roan Cr arm of Watauga L, Johnson Co (RLK); 4 Apr thru May (1 female) Watauga R (FRC, DK, RLK), accompanied by a male on 4 / 19 April. **Red-breasted Merganser**: 2 Mar (12) Roan Cr arm of Watauga L, Johnson Co (RLK); 6 Mar (14) South Holston L (RLK), max.

Bobwhite - Crane: **Northern Bobwhite**: 19 May (1) Shady Valley (RRK et al.), rare . **Horned Grebe**: 20 May (1, breeding plumage) Watauga R (Harry Farthing, Sue Farthing, photo), lrs. **Eared Grebe**: 6 Mar - 9 Apr (1) South Holston L (RLK, m.ob.), in breeding plumage by early Apr (MWS, photo). **Double-crested Cormorant**: 4 Apr (~200) South Holston L (MWS), equals high count in NE TN; late Apr thru May (2 nests, 1 with 2 yg) island in Watauga L at Rat Branch, Carter Co (BP, JP et al.), in small Great Blue Heron rookery, first cormorant nests in county and in Mountain region. **Great Egret**: 27 Mar (3) Elizabethton (TSM) and (1) Unicoi Co (Bryan Stevens), ers. **Black-crowned Night-Heron**: 24 Mar (1) Sugarlands, GSMNP (Daniel Perales). **Yellow-crowned Night-Heron**: 3 Apr thru season (pair at nest) Watauga R (RLK, m.ob.), ers. **Osprey**: 13 Mar (1) South Holston L (RMC), ers. **Red-shouldered Hawk**: 23 May (1) Hampton Cr Cove (RLK et al.). **Broad-winged Hawk**: 1 Apr (1) Foothills Parkway (NeM), ers. **Golden Eagle**: 8 Mar (2) Hampton Cr Cove (DK, Kevin Brooks). **Virginia Rail**: 9 May (1) Quarry Bog in Shady Valley (GDE, PGR, RPL). **Sora**: 9 May (1) Quarry Bog in Shady Valley (GDE, PGR, RPL). **Sandhill Crane**: 1-8 Mar (2-3) South Holston L (Nicholas Lorch, m.ob.).

Sandpiper - Falcon: **Spotted Sandpiper**: 14 Apr (1) South Holston L (RLK), ers. **Willet**: 3 May (3) South Holston L (MWS, photo). **Short-billed Dowitcher**: 6 May (1) South Holston L (MWS, photo). **American Woodcock**: 21 Mar (1) Carver's Gap on Roan Mtn, Carter Co (DK). **Bonaparte's Gull**: 4 Apr (325) South Holston L (RLK), max. **Caspian Tern**: 4 Apr (1) South Holston L (RLK), ers; 16 Apr (1) Parksville L, Polk Co (Rick Houlk). **Black Tern**: 9 May (1) South Holston L (GDE, PGR, RPL). **Forster's Tern**: 11 Apr - 5 May (4 reports of 1-5) South Holston L (RBB, m.ob.). **Black-billed Cuckoo**: 9-26 May (1-2) Hampton Cr Cove (Fred Alsop, RLK, m.ob.). **Northern Saw-whet Owl**: 9 May (1) Unaka Mtn, Unicoi Co (Joe McGuiness). **Eastern Whip-poor-will**: 1 Apr (3) Del Rio, Cocke Co (MBS), ers. **Ruby-throated Hummingbird**: 4 Apr (1) Holston Valley (RPL), ers. **Red-headed Woodpecker**: 14 Mar (1) Cades Cove, GSMNP (WB). **Merlin**: 23 Apr (1) Elizabethton (Fred Alsop).

Peregrine Falcon: 10 Mar - 24 Apr (pair, visiting apparent nest site) Doe R, Gorge, Carter Co (PGR, RLK); 8 May (2 ad, 1 yg) Alum Cave Bluff, GSMNP (Chuck Estes); 17 May (1) South Holston L (RPL).

Flycatcher - Pipit: **Alder Flycatcher**: 9 May (1) Carver's Gap on Roan Mtn, Carter Co (MWS), ers; 10 May thru season (1) Hampton Cr Cove (RLK); 19 May (1) Clingman's Dome, GSMNP (Tim Ludwick). **Willow Flycatcher**: 9 May (5) Shady Valley (GDE, PGR, RPL). **Eastern Kingbird**: 11 Apr (1) South Holston L (TSM), ers. **Loggerhead Shrike**: thru season (pair) Holston Valley (m.ob.). **Yellow-throated Vireo**: 10 Apr (1) Holston Valley (RPL), ers. **Blue-headed Vireo**: 14 Mar (1) Cades Cove, GSMNP (WB), ers. **Warbling Vireo**: 28 Apr (1) Watauga R (RLK), ers. **Common Raven**: 24 Apr / 8 May (nest with 3 yg) Doe R, Gorge, Carter Co (RLK); 19 May (2-3 fledged yg) Shady Valley (TSM). **Brown Creeper**: 26 Apr (4) Roan Mtn SP, Carter Co (James Neves), in grove of dying hemlocks; 25 May (1, singing) Roan Cr arm of Watauga L, Johnson Co (SJS). **American Pipit**: 14 Mar (30) Cades Cove, GSMNP (WB).

Warbler - Siskin: **Worm-eating Warbler**: 1 Apr (1) Foothills Parkway (NeM), quite early. **Black-and-white Warbler**: 1 Apr (1) Foothills Parkway (NeM), ers. **Golden-winged Warbler**: late Apr thru May (5-9) Hampton Cr Cove (m.ob.); 9 May (2) Street Gap, Unicoi Co (Joe McGuiness). **"Brewster's" Warbler**: late Apr thru May (1) Hampton Cr Cove (John A. Jones, m.ob.), nearly annual presence since 1996 in vicinity. **Magnolia Warbler**: 17 May thru season (1-4) Unaka Mtn, Unicoi Co (DK, RRK). **Yellow Warbler**: 11 Apr (1) Watauga R (RBB), ers. **Yellow-throated Warbler**: 26 Mar (1) Wilbur L, Carter Co (BP, JP), ers. **White-crowned Sparrow**: 11 May (1) Elizabethton (RLK), lrs. **Scarlet Tanager**: 11 Apr (1) Holston Mtn, Sullivan Co (RBB), ers. **Rose-breasted Grosbeak**: 22 Apr (1) Wilbur L, Carter Co (BP, JP), ers. **Purple Finch**: small numbers lingered thru Apr (m.ob.). **Red Crossbill**: 14 Mar (3) Cades Cove, GSMNP (WB), only report. **Pine Siskin**: 6 Mar (300+) Pittman Center, Sevier Co (KW), max; small numbers lingered at several sites into early May (m.ob.).

Locations: Elizabethton - Carter Co; Foothills Parkway - Blount Co; GSMNP - Great Smoky Mtns. National Park; Hampton Cr Cove - Carter Co; Holston Valley - Sullivan Co; Shady Valley - Johnson Co; South Holston L - Sullivan Co; Watauga Dam - Carter Co; Watauga R - Carter Co.

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Erratum: A long-standing error in *The Migrant* 58(1):31, 1987 - - **Willet**: the date 8 Nov (1986) should actually be 8 Aug. At no fault of their own, this error was repeated by Robinson (1990, *An Annotated Checklist of the Birds of Tennessee*) and Somershoe and Sloan (2015, *Birds of Tennessee: A New Annotated Checklist*) as the latest fall date for this species in the state. (RLK).

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RBB - Robert B. Biller
KAC - Kevin A. Calhoon
RMC - Ron M. Carrico
PDC - Phillip D. Casteel
JWC - J. Wallace Coffey
RHC - Richard H. Connors
FRC - F. Rack Cross
BD - Bruce Dralle
KDE - K. Dean Edwards
GDE - Glen D. Eller
FF - Frank Fekel
MAG - Mark A. Greene
RH - Rob Harbin
RDH - Ron D. Hoff
SHo - Susan Hoyle
SHu - Susan Hubley
DRJ - Daniel R. Jacobson
DK - David Kirschke
RLK - Richard L. Knight
RRK - Roy R. Knispel
RPL - Richard P. Lewis
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TSM - Thomas S. McNeil
NeM - Nell Moore
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DMy - Dollyann Myers
GP - Gaynell Perry
BP - Brookie Potter
JP - Jean Potter
DDP - Dick D. Preston
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The Migrant records observations and studies of birds in Tennessee and adjacent areas.

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